



## Re-thinking Emergency Response Training: Sheridan Athletic Therapy Student Success Story

**Matthew Miller discovered that mannequins can breathe new life into emergency response training.**

Entering his 3rd year of Sheridan's Athletic Therapy (AT) program, Matthew wanted to get more involved in research, so he stepped outside his coursework to join Dr. Loriann Hynes, a professor in his department. She teaches the AT program's emergency courses.

Together, they designed a study that looked to compare how students best learn emergency response skills – using live students pretending to be injured versus using “high-fidelity” simulation mannequins. (Traditionally, students in this program have taken emergency courses and worked with fellow students who simulated medical conditions.) At first, one might think that live participants would lead to more

accurate practice responses, but Matthew's research revealed that sometimes, the real thing isn't always the best thing.

A high-fidelity mannequin is so much more than those found in store windows. These mannequins are sophisticated learning tools that can be programmed through a computer to simulate a variety of physical symptoms. It can blink, its pupils can respond to light, it can breathe, it can have a heart rate, it can have blood pressure taken and it can even “talk” through a programmer speaking through a microphone.

Dr. Hynes and Natasha Frank, (a simulation technologist) programmed the mannequin to demonstrate an emergency scenario that would let students see some of the physical responses that go along with an injury.

(For example, with shock, a person's heart rate increases and their blood pressure drops – responses that could be created with the mannequins but not simulated when using a live classmate.) Their goal was to see if practicing on mannequins made students feel more comfortable with being able to recognize such symptoms and responses.

“I knew I liked research, but this experience helped me realize I can combine my passion for athletic therapy and my passion for research and help benefit others,”  
- Matthew Miller, Student Research Assistant

Matthew helped Dr. Hynes develop the questionnaires, collect the data (figures, graphs, statistics) and write up the study's results. “I was very excited to get involved and this was an awesome experience from the beginning,” said Matthew who hopes to return to his native Nova Scotia to open his own athletic therapy clinic. “Dr. Hynes let me take the lead on a lot of aspects, which really allowed me to learn and improve my research skills.”

As a whole, the students felt their abilities and confidence in terms of assessing and responding to emergency situations increased when using mannequins, as opposed to live participants. Dr. Hynes also noticed Matthew's confidence grew. “I think this study benefitted him in putting his name out there in the athletic therapy world, but I also think it's helped him as a student,” said Dr. Hynes, who hopes to integrate mannequin training in the athletic therapy program.

“It helped him recognize there are different ways to learn. Just because you learn something in a classroom, the way you learn it doesn't mean that's the only way to experience it,” she added.

“Dr. Hynes allowed me to be the lead author on the paper which enabled me to present at the national Canadian Athletic Therapy Conference last May in Winnipeg,” said Matthew. “That was my first time presenting at a conference. I was nervous, but the feedback from professionals in the field, professors and colleagues was all positive.”

Just as positive are Matthew's future career plans that could possibly include completing a PhD, though he's keen on first getting professional experience.

“I knew I liked research, but this experience helped me realize I can combine my passion for athletic therapy and my passion for research and help benefit others,” he said.

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